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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/658,799 | 09/10/2003 | Seong-Jin Moon | 1293.1723 | 1813 |
| 49455 7590 09/12/2007 STEIN, MCEWEN & BUI, LLP 1400 EYE STREET, NW SUITE 300 WASHINGTON, DC 20005 | | | EXAMINER TOPGYAL, GELEK W | |
| | | | ART UNIT 2621 | PAPER NUMBER |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|------------------------------------|--|
| Office Action Summary | Application No. 10/658,799 | Applicant(s) MOON ET AL. | |
| | Examiner Gelek Topgyal | Art Unit 2621 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28, 39 and 40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28, 39 and 40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>See Continuation Sheet</u> . | 6) <input type="checkbox"/> Other: _____ |

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :2/23/04, 6/28/06, 7/06/06, 8/18/06.

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), Annex IV, reads as follows:

Nonfunctional descriptive material that does not constitute a statutory process, machine, manufacture or composition of matter and should be rejected under 35 U.S.C. Sec. 101. Certain types of descriptive material, such as music, literature, art, photographs and mere arrangements or compilations of facts or data, without any functional interrelationship is not a process, machine, manufacture or composition of matter. USPTO personnel should be prudent in applying the foregoing guidance. Nonfunctional descriptive material may be claimed in combination with other functional descriptive multi-media material on a computer-readable medium to provide the necessary functional and structural interrelationship to satisfy the requirements of 35 U.S.C. Sec. 101. The presence of the claimed nonfunctional descriptive material is not necessarily determinative of nonstatutory subject matter. For example, a computer that recognizes a particular grouping of musical notes read from memory and upon recognizing that particular sequence, causes another defined series of notes to be played, defines a functional interrelationship among that data and the computing processes performed when utilizing that data, and as such is statutory because it implements a statutory process.

2. **Claims 1-21 and 39** are rejected under 35 U.S.C. Sec. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claims 1-21 and 39 recite a mere compilation of data, which does not impart functionality to a computer or computing device, and is thus considered nonfunctional descriptive material. Such nonfunctional descriptive material, in the absence of a functional interrelationship with a computer, does not constitute a statutory process, machine, manufacture or composition of matter and is thus non-statutory per se.

Claim Rejections - 35 USC § 102

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3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. **Claims 1-2, 7-16, 22, 24-25, 39 and 40** are rejected under 35 U.S.C. 102(e) as being anticipated by Cho et al. (US 2002/0176693).

5. **Regarding claim 1**, Cho et al. teaches a multimedia data storage medium, comprising:

a first layer storing multimedia data (Fig. 1, Data Zone); and

a second layer in which, when the multimedia data is divided into a record unit and a reproduction unit (the area where audio and video data is recorded (Fig. 1, Data Zone) functions as the location where multimedia data is “recorded” and later “reproduced” from), information of attributes of the record unit and a relationship between the record unit and the reproduction unit are described with a markup language (Fig. 1 and paragraph 31 teaches Script File Zone (SFZ) stores script files in the form of HTML files. The script files includes information of the audio and video data that is recorded on the medium in the “record” and “reproduced” unit).

Regarding claim 2, Cho et al. teaches the claimed wherein the multimedia data recorded on the first layer is video object data, still image data, or audio data (The Data Zone as discussed above records video and audio data).

Regarding claim 7, Cho et al. teaches the limitations as discussed in claim 1 above, and furthermore, as seen in Fig. 4, the structure of the video information stored on the disc is hierarchical in nature. E.g. multiple VOBUs comprise a VOB unit, and multiple VOB units comprise a PGCI unit.

Claim 8 is rejected for the same reasons as discussed in claim 7 above.

Regarding claims 9 and 10, Cho et al. teaches wherein the reproduction unit has three layers comprising a cell (Fig. 4, VOBU units are stored in sectors (inherent data block of optical discs)), which designates the record unit or a portion of the record unit, a chapter (Fig. 4, VOB units), and a title (Fig. 4, PGCI) linked to the chapter.

Regarding claims 11 and 12, Cho et al. teaches the claimed wherein the information described using the markup language comprises a clip (Fig. 4, VOBU units), the cell (Fig. 4, VOBU units are stored in sectors (inherent data block of optical discs)), the chapter (Fig. 4, VOB units) and the title (Fig. 4, PGCI unit).

Regarding claims 13-15, Cho et al. teaches that the navigation data stored in Navigation Data Zone (NDZ) controls the reproduction of the reproduction sequence stored on the disc. Figures 2 and 3 show an example of navigation information that is used during reproduction of the stored sequence on the disc.

Regarding claim 16, Cho et al. teaches a multimedia data storage medium, comprising:

a first layer storing multimedia data (Fig. 1, Data Zone); and

a second layer in which, when the multimedia data is divided into a record unit and a reproduction unit (the area where audio and video data is recorded (Fig. 1, Data

Zone) functions as the location where multimedia data is "recorded" and later "reproduced" from), information of attributes of the record unit and a relationship between the record unit and the reproduction unit are described in a table format (Fig. 1 and paragraph 31 teaches Script File Zone (SFZ) stores script files in the form of HTML files. The script files includes information of the audio and video data that is recorded on the medium in the "record" and "reproduced" unit. The script files are stored in a table format as illustrated in Figures 6-9).

a third layer storing navigation data of a selection of the reproduction unit and reproduction sequence (Fig. 1, Navigation Data Zone (NDZ)).

Apparatus claim 22 is rejected for the same reasons as discussed in medium claim 16 above, and furthermore, a user manipulates the disc to reproduce the audio and video data stored thereon.

Apparatus claim 24 is rejected for the same reasons as discussed in claim 16 above.

Apparatus claim 25 is rejected for the same reasons as discussed in medium claim 16 and apparatus claim 22 above.

Medium claim 39 and apparatus claim 40 are rejected for the same reasons as discussed in claim 16 above, and furthermore, the Navigation data stored in the Navigation Data Zone (NDZ) and as illustrated in Figures 2-3 and 5 (and supporting disclosure) teaches that the playback of the multimedia data stored is controlled by the Navigation data.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claims 3-6** are rejected under 35 U.S.C. 103(a) as being unpatentable over Cho et al. (US 2002/0176693) in view of Fujinami et al. (US 5,455,684).

Regarding claim 3, Cho et al. teaches the claimed wherein the when the multimedia data is video object data, the multimedia data is coded at a variable bit rate (VBR) (an inherent feature of DVD formats, wherein data recorded thereon can be recorded with VBR or with CBR), however fails to particularly teach a reproduction time and linkage information of a position of reproduction data are described as temporal and position information, where the reproduction time and the linkage information are in a table format and recorded on the first layer.

In an analogous art, Fujinami et al. teaches in Fig. 14 and 19 of an entry packet header stored within a GOP unit for defining locations of the three next and the three previous locations of GOPs (-3, -2, -1, +1, +2, +3). This meets the claimed limitation of reproduction time and linkage information stored in a table format.

The system of Cho et al. has inherent features for fast forward and fast rewind, but is not explicitly stated. Figures 4, 8 and 9 shows the format of the medium wherein VOB and VOBu units are stored. The each VOBu unit can store one or more GOPs.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the ability to link a GOP unit with the next and previous GOP locations as taught in Fujinami et al. into the system of Cho et al. in order to improve fast forward or fast rewind search.

Regarding claims 4-6, the proposed combination of Cho et al. and Fujinami et al. teaches the limitations as discussed in claim 3 above, and furthermore, Fujinami et al. teaches wherein the record unit comprises a clip (GOP) made by linking the video object data to the temporal and position information (As discussed in claim 3 above, the GOPs meet the claimed "clip" which is linked to by the address information of the three next and the three previous start of GOP). Furthermore, the GOPs (VOBUs in Cho et al.) are stored within the medium, which as discussed in claim 1 above, includes both the "record" and "reproduction" unit.

8. **Claims 17-21, 23, 26-28** are rejected under 35 U.S.C. 103(a) as being unpatentable over Cho et al. (US 2002/0176693) in view of Niranjana et al. (US 2004/0046778).

Regarding claim 17, Cho et al. teaches the limitations as discussed in claim 16 above, however, fails to particularly teach wherein the navigation data stored in the third layer is a script language that is interpreted and executed.

In an analogous art, Niranjana et al. teaches in paragraphs 36-45 wherein navigation data in the form of XML (script/markup language) information can be stored locally on a PVR.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the ability to store navigation information in the form of markup language, as taught in Niranjani into the navigation data zone of Cho et al. so that devices using markup language as a standard of data can recognize the data and thereby reproduce information stored thereon.

Claim 18 is rejected for the same reasons as discussed in claim 17 above, and furthermore, to allow for features of regular playback, and furthermore the features as discussed in paragraph 51 requires "timing and synchronization functions" in the like of time stamps so that audio and video information are presented in synchronization.

Regarding claim 19, it is rejected for the same reasons as discussed in claim 18 above, and furthermore, Niranjani teaches the claimed wherein presentation data is described with a markup language and stored in the third layer, and comprises information for a layout of a menu screen (Paragraph 51) and a screen structure of the reproduction unit (Paragraph 51).

Claim 20 is rejected for the same reasons as discussed in claim 19 above.

Claim 21 is rejected for the same reasons as discussed in claim 19 above, and furthermore, paragraph 36 teaches of event/scripting information 275.

Apparatus claim 23 is rejected for the same reasons as discussed in claims 9 and 19 above.

Apparatus claim 26 is rejected for the same reasons as discussed in claim 17 above.

Apparatus claim 27 is rejected for the same reasons as discussed in claim 18 above.

Apparatus claim 28 is rejected for the same reasons as discussed in claim 19 above.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The cited references teach systems that record navigation data and audio video information on separate layers.

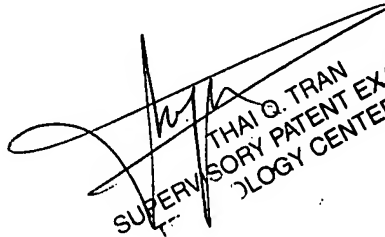
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gelek Topgyal whose telephone number is 571-272-8891. The examiner can normally be reached on 8:30am -5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thai Tran can be reached on 571-272-7382. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

GT
8/23/2007


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